842 married life; he has been married early and has no arrears of
163 sex-starvation to make up, and he lives a healthy, active, out-door life with no unwholesomely suggestive literature or cinema shows to stir his blood to rebellion. This admirable convention automatically spaces Hunza infants at decent intervals without artificial birth-control.

837 Unfaithfulness on either side is extremely rare, and I venture to assert without fear of contradiction that in Hunza morals
[348] are higher than in any other country in the world. There is no
● [164] prostitute in the country, and no venereal disease. We may, I think, fairly ascribe this to high principle and a strongly developed tradition of fine practice, but we need not overlook the fact that circumstances conspire to reinforce principle. DL and I used sometimes to amuse ourselves speculating on the possible ways in which a pair of errant lovers, if such existed, could gratify their guilty passion, and we decided that the way of transgressors would be exceptionally hard.

No man or woman could be absent from the usual sleeping place without immediate comment, and by day each person's duties and destinations and occupations are common knowledge. The countryside lies sloping and open to view, and every corner and cranny of it, even the desolate rocky mountain sides where large boulders or ravines or semi-caves might seem to offer privacy, is subject to invasion at any moment by a herd-child with his goats. One tale was told us of an intriguing pair. The woman lover went to the edge of the river cliff, left some identifiable articles on the brink, and staged an accident. She then hid herself with the mother's connivance in the locked store-room of her lover's house. No search was made for the body, for these mountain rivers reveal no secrets, but it was, of course, not long before her presence in her lover's house was discovered. The unusual case came up before the Mir, whose sane judgment was that the guilty pair had better be divorced from their lawful partners and married to each other. Public opinion would have none of it, and while discussion was proceeding the disgraced woman drowned herself in earnest. I don't remember what the man's fate was, but general odium would certainly compel him to seek voluntary exile.

THE FIRST OF THE HARVEST

it to be ground. But "Starvation Springtime" was still ruling the land, and we noticed the children looking very thin and peaky, and a few with sores on their faces—hunger sores. We had often remarked on the complete absence of skin diseases amongst these cleanly folk, and the hunger sores rapidly disappeared with the coming of more food.

The opening of June saw weeding being very intensively carried out, not only for the sake of the growing crops, but for the weeds' own sake; those which were dubbed "crows' vegetables" were thrown to the sheep and goats, while sorrel and the like found their way into the family cooking-pot. Irrigation questions were now serious, for the crops must not be starved of water at the critical moment, and we used to meet bands of Aliábádkuts armed with shovels walking out the eight or more miles to the highest point of the Dála to guard and govern the controlling sluices. The potatoes were now beginning to flower and the mulberries to show signs of ripening, and the air was rent by shrill boy and girl noises designed to scare the birds off the mulberry trees. Every boy was armed with his catapult bow, made and strung of course by his own hands. I asked Yaman how many birds he had killed with his little stones: "Seventy-two, so far this season, Mother, but I'll get lots more." "What do you do with them?" "Oh, I take them home and put them in the pot, but there's not much meat on them." Our first impression of Hunza had been that, except for magpies, it was an entirely birdless land; this was a mistake. Migratory birds came in flocks at various seasons when any sort of likely food was going. Their various species I was not ornithologist enough to know; to me, as to A. J. Balfour, each was just "an average small bird," and the Hunza terminology was no great help to identification, for they were known as "mulberry birds," "barley birds," or the like, according to which crop they threatened. We now also for the first time saw shorn goats. Whereas the Hunza sheep are robbed of their wool just whenever wool is needed, so that you never see a really generous-looking ample fleece, the goats are shorn only once a year, in early summer. If you think of it, goat's hair would be too wiry to spin at all unless it were a decent length.

3. Birds.

bola.	*gats.hir.*	*ɣokʊrʌs.*	*mʌnḍaʏ.*	*qərʊɣo.*
čili bʌbok	*ginḍaʏɪəɔr čhin.*	*ɣʊn.*	*mixʊn.*	*sindiʂ.*
v. Corrigenda,	*girgir.*	*hʊɣo.*	*pfərʐ̌.*	*ʃɪqʊčhin.*
III. C0. II.	*goɣi.*	*hʊrpərpo* N.	*pfʊlčin.*	*3. tʌl.*
diq maɣʊn.	*ɣa.*	*kʌpo.*	*pʊrpo.*	*ɟhʌtaqʌs.*
gaɣu.	*ɣɛnɪʃčhin.*	*kʊr.*	*qʌlq.*	*ɛəpɪcr.*
gərʊltʊm hɔrʌɣ.	*ɣɔɣʊndɪl.*	*kʊʊti* N.		

Varieties of Hawk.

bʌr.	*bʌrʒa čʊrp.*	*gʌsʌnč.*	*šahin.*	*šʊmoqʌr.*
bahri.	*čɔrx.*	*kirki.*	*širntiʊ.*	*teɣʊn.*
bʌrʒa.	*čʊuli.*	*kiŋkiʊki* N.		

4. Insects.

biškəkɪʃ ɣʌlgu.	*hʌmiʊšo.*	*kərkʌnʌs.*	*mʊrndʌs.*	*ʃɔro.*
čumʊrgo.	*hiriʊmʌn.*	*khɔru.*	*pfʌʊltso.*	*tʊrʌsnʌs.*
ɟʊrnḍu.	*hʊʊlʌlʌs.*	*khiʊn.*	*pfin.*	*tʊrʌrʌs.*
gʊrnhʊʊlʌlʌs.	*khʌnimujuʊko.*	*khiʊšo.*	*pfɪrʌn.*	*trʌqo.*
hʌɣʊrs pfin.	*kʌŋka.*	*kon.*	*ɬɪqɔr.*	*ʂiki.*

5. Diseases.

ʌskʊr.	1. *ɟʌk.*	*loɣomʊts.*	*pfʌlʌɣi.*	*tʌrlʊmʊts.*
dʌlʌɣɔr.	*xʊrtʊʊmoʃ.*	*mʌq.*	*pərizʌxʊm.*	*tiʊti* N.
dʌmkʊrtai N.	*xʊs.*	*mɔrʌɣ.*	*rʊni.*	**-ʊrlʊlo tʌ.hil.*
gərʊʊmkʊl.	2. *lʌm.*	*mirgi.*	*sʊzʌrk.*	*tʊʊponʊs* N.
ɣərtsikɪʃa.	*lʌm čʌm.*	*nʌrilʌ.*	*šʊʊšu.*	*tʌŋzʌŋ dʌlʌɣɔr.*
ɣəlčikɪʃ.	*loɣo.*			

(*Of cattle*) *girča.* (*Of grain*) *matal.* 6. *tʌm.*

6. Food.

a. Varieties of Bread and Cakes, etc.:

bʌɣʊndo.	*gɔrma.*	*kɛči krčʌrli.*	*pfiʊti.*	*širik* N.
diram pfiti.	*giyʌl.*	*xʌmʌli.*	*sʌlʌdʌči.*	*širu.*
doldoŋgi.	*ɣʊmʌldi.*	*xɪsta.*	*ɬʌpiʊk.*	*šiʃɔr.*
2. dumoɣo	*jʌgai.i.*	*lʌrša.*	*šʊro.*	*ʃuʃo.*
gənpfiʊti.				

b. Milk and Milk Products:

bʌq N.	*diltɔr.*	*mʌskʌt.*	*mɪʌka.*	*qərʊt.*
bərʊʊ.	*yiḍiŋ.*	*mʌmu.*	*pai.i.*	*rʌxpiʊn.*
čika.	*kilaɣ.*	*mʌntʌ.hil.*		

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114 on a remarkable piece of reporting!

A splendid bit of writing about Hunza appears in the book called *After You, Marco Polo* by Jean Shore. Mrs. Shore is a remarkable traveler, a wide-eyed, eager observer and a writer with a fine sense of humor. Although only 36 pages of her book are devoted to Hunza, they are "must" reading for anyone who wants to have a clear picture of the Mir, the Rani and the ways of life and the people. Oh, yes, and her description of the country is a delight.

114 Now I must deal with two books that deal princi-
• 164 pally with the health of the people of Hunza. They are written by G. T. Wrench in 1938 and J. I. Rodale in 1948. If the health of the Hunzans is a myth, then these two gentlemen helped spread or perpetuate the myth. However, here is evidence that should dispel any thought of fancy.

Sir Robert McCarrison, C.I.E., M.A., M.D., D. Sc., L.L.D., F.R.C.P., B.A.O., spent the years 1902-4 as regimental medical officer in Chitral and 1904-11 as the Gilgit Agency surgeon. In that important office he had a splendid opportunity to study the health of the inhabitants of that area. Hunza is a part of the Gilgit Agency.

Dr. McCarrison reports: "During the period of my association with these people I never saw a case of asthenic dyspepsia, of gastric or duodenal ulcer, of appendicitis, of mucus colitis, of cancer. . . . Among these people the abdomen oversensitive to nerve impressions, to fatigue, anxiety, or cold was unknown. Indeed their buoyant abdominal health has, since my return to the West, provided a remarkable contrast with the dyspeptic and colonic lamentations of our highly civilized communities."

This lends credence to the outlines and hypothesis

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concerning the health of the Hunzans. I have found the observations made by both authors, J. I. Rodale and G. T. Wrench, to be both authentic and comparatively reliable when it is taken into consideration that their work was done in the early years when not much information was available from Hunzaland. They were pioneers in the field to show the people of the world that there was a simple, natural, organic way to health.

Can anyone doubt that Hunza is located in one of the most inaccessible parts of the entire universe? The fact that a people—a handsome, virile, intelligent, civilized people—could live in such an inaccessible part of the world and still be considered among the healthiest of all people on the face of the globe is intriguing, to say the least.

Perhaps the story of their health, longevity and energy so shocked our concepts that we had to look twice or read twice to make sure that the statements we were reading could be accepted. Probably because of our smugness—with the feeling of security because of our modern medicines, our miracle drugs, our hospitals, our research techniques, our lab equipment and such—it was incomprehensible to us that a people so remotely located without all of these tremendous benefits could even exist, let alone be considered to be the healthiest and longest living people in the world.

Was it our disdain of eastern methods and way of life that rattled our concepts?

Now it could be that the dreamers among us had our imagination fired like it has never been fired before . . . to think that a people living truly on the roof of the world without benefits of modern civilization could subsist or exist, let alone be healthy!

But as one investigates, he finds that Hunza is one of the few places in the entire world, where there is a

people who retained their character, independence, freedom and primitive way of life. It is my belief that they are not much further advanced today than they were more than 2,000 years ago. Fearing that you may think I mean this in a derogatory manner, I would hurry and add that their way of life 2,000 years ago obviously was as good in many ways, or better, than our way of life today. But that is a measure for individual acceptance.

They owe their strength, their health, their longevity, their happiness to that wall of mountains that surrounds them and keeps out all but the boldest and most venturesome of invaders or travelers. They are surrounded by the most massive, the hugest, the greatest accumulation of mountain grandeur and awesomeness to be found anywhere on the world's surface. With such impenetrable guardians, it is not too difficult to understand the reason for their comparative privacy.

From what I saw and gathered, I found that one would not have to go many miles from any given point in Hunza to reach a location where no human being's foot had ever trod before. Should you have the desire to do just that, you can find millions of acres that have not felt the imprint of man within a few miles from most any given spot in Hunza.

Living in comparative isolation has made these people courageous and fearless. They are not stooges of civilization and all its implications. There, in Hunza, a man's individuality is still a characteristic trait to which they cling.

Now comes the big question—one that hundreds of people have already asked me . . . people who have but a faint knowledge or have heard a bit of news about Hunza and have been interested and fascinated by the myths and fables circulated about her—can Hunza

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survive despite the encroachment of modern civilization? 177

I go on record as saying, "Yes, she can survive but it will take good leadership, and the present ruling Mir —my friend, Mohammed Jamal Khan—is capable of this leadership, provided he is not interfered with by the powers that surround him or emanate from Karachi!"

The first detrimental factor that is crawling into Hunza at the present time, and has been for some years, is salt. Already numerous cases of goiter have appeared which did not exist before when they used their native salt. 177 263 164

Travel in Hunza is restricted. In fact, at the present time no foreigner is allowed into the state without a permit and that includes Pakistanis as well. As far as I know, my friend Cec Brunton and I were the last foreigners to enter Hunza. With the political situation as it is today, I doubt if anyone else will be permitted to enter the country until the situation changes. 486 648 123

The fact that China is at the present time encroaching upon India is a rather significant factor. I really can't appraise its implications because the disputed area by any calculation seems to be of little or no value. There are millions of such acres available throughout Tibet and the Himalayan cordillera as well as in the Karakorums. Therefore it must be just for aggrandizement that China is moving. If that is her aim and desire, then Hunza would be right up her alley. 648

Yet it is my firm belief that China will not bother Hunza. I know the Afghans have looked with longing eyes on that part of Pakistan for some years, but they have neither the arms nor the men to successfully invade the area, although with arms from Russia and a little prodding, things could get hot in that area. How-

ever, such a move, in my humble opinion, would be most ill-advised because the Pakistan government has splendid leadership, a good army and a mighty impregnable position in Gilgit. Undoubtedly Gilgit is the most accessible point in that entire area and Gilgit which belongs to Pakistan, is most capably staffed, manned and led.

Even as I write my tale, changes are occurring in Hunza. In a letter received from the doctor just before my book went to press, he told me that many diseases unknown in Hunza before are making their appearance—primarily because they are brought back by native Hunzans who go out to serve in the army or work in other parts of Pakistan and the area.

The population of Hunza is as great now as its land can foster and sustain. There is no reason to believe that the birth rate in Hunza will decrease and that means that more and more of the people of Hunza will have to seek a livelihood elsewhere. But they will keep returning and bringing with them the benefits of civilization. That, in my opinion, will be the undoing of that little paradise on earth.

Being blessed with the earth's most fabulous mountain scenery may also be the cause of Hunza's undoing. I've noticed that exploration parties and mountain climbers have been congregating in that area more and more. British, Swiss, German, Italian and Austrian expeditions have been in or are planning to go into the Karakorums to scale those hundred peaks over 20,000 feet high.

The magnetism of unscaled impregnable mountain summits becomes overpowering to many men. Why bother with the Pyrenees, the Alps, the Rockies or the Andes, when the Himalayas, the Karakorums and the Hindu Kush offer a much more taunting challenge?

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CHAPTER 34

About the People of Hunza

•164 THE CLAIMS made for the people of Hunza border on
165 the fantastic. It is claimed that there they live to be 140 and more years of age without trouble and that their mountain home is the genuine Shangri-la, where a man can live without worry or stress in perfect joy and happiness. The claim is also made that their men can sire children when they're 70, 80, 90 and even 100 years of age.

Yes, and another visitor to Hunza said that the women of 80 and 90 are as youthful and as beautiful as our own women of 30 and 40. Well, apart from the [644] Rani who I truly believe was one of the most beautiful women I have ever been privileged to see, I didn't notice anything spectacular about the women of Hunza.

123 Let me be even more frank . . . I hardly saw any women at all. Over the many miles of Hunza territory that I walked, I seldom saw a woman. I saw a few girls

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There is more wheat grown in Hunza than any other single grain crop. Therefore the wheat they use must be one of the vitally important contributors to the health of these people.

If you will take time to study the habits or the peculiarities concerning the growing of wheat, you will quickly learn that wheat will not grow on poor or unbalanced soils. One of the first things that my father taught me many long years ago was that your best land must be used if you want to grow a good crop of wheat. Rye or barley, he told me, you can grow most anywhere, but wheat is fussy. If the nutrients aren't there in the soil, the wheat will not grow and your crop will be a failure. All through my travels in Nagir and Hunza I saw wheat and it looked good. It wasn't the same tall wheat that we grow in the Canadian West, but it was wheat and the yield was comparatively bountiful, which means that the Hunzan soil must contain the required nutrients—and to grow wheat, there are many.

Therefore there is a direct connection between the nutrient contents of the soil of Hunza and the wheat that it grows, the flour that they use, the bread that they eat and the health of these people.

Here and now I want to explain that I am not making decisions for anyone. I am trying to lay down the facts as I found them. As stated above, in order to grow good wheat or even to grow wheat at all, the soil must contain all of its required nutrients. It is obvious, therefore, that the soil has the required nutrients and as all of the Hunzan soil is shallow, these nutrients must be regularly reincorporated into the soil.

I have already related that everything that is taken from the soil is returned to the soil by the natives. Consequently we know that nothing is lost. Hunza does not export food. That I know, because there is barely

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Whether or not apricot oil contains any special qualities I am unable to say. Perhaps someone will do some research on it in the near future and perhaps we will learn that apricot oil is another of the reasons why the Hunzans keep their health.

But for the moment, contrast the way the Hunzans get their oil and the way the people of the Western world get theirs. I know of no oil that is offered for general sale in America that is not treated or rendered by a harsh chemical solvent. Nor do I know of any oil sold or that is generally procurable on which a color extractor or bleach is not used. There is no reason why we cannot have apricot oil in the West, but if we did have it, I'm afraid any or most of its good, health-giving effects would be lost, if a solvent or a bleaching agent were employed.

Yes, I do know that there are vegetable oils offered on the market that have been prepared by the expeller method, but such oils are seldom seen, are quite expensive and only the keenly health-minded people who know what they want will pay the price and look for them.

Maybe sunflower seed oil, corn oil or olive oil are every bit as good as apricot oil, but the *process*—therein lies the secret of health or disease. The most satisfactory method of rendering oil from grains or nuts is the simple natural cold press process, after which it is filtered.

The accent during the past few years has been markedly towards the vegetable oils against animal oils. Researchers seem to have proven without any fear of contradiction, that the vegetable oils are much less harmful or actually beneficial to the human system, whereas the animal oils are suspected as being prime contributors in most cases to arteriosclerosis and ultimately, heart disease.

A farmer who owned and worked 10 acres of workable land might be able to afford to slaughter a sheep, a goat or a bullock once a year. Yet this luxury could not be dreamed of by the farmer with but one acre.

Also, while winter lasts, a glass of wine made from Hunzan grapes is enjoyed occasionally . . . but chiefly by the male head of the household.

Knives, forks and spoons as are used in the West are not seen in the average Hunzan home and even earthenware plates are rare. But cups and earthenware bowls are to be found in most homes. Wooden bowls fashioned out of walnut by the wood-turner of the village are also used in many homes.

The rooms are quite bare in most homes. Furniture is a luxury and a rarity. In the homes there are found usually a chest, a chair or a couch and a table. Shelves to hold dishes are seen in most every home. Occasionally, a dresser or cabinet can be found. The floor in an average Hunzan home is an earthen one with a large square hole in the center for the fire. Then, of course, there is a large square hole in the roof to allow the smoke to leave and to allow light to enter, for there are no glass windows. This is fully open in the summer but during the colder winter days the hole is kept partly or almost closed. This is the chief contributor to the eye troubles which affect many people in Hunza, as mentioned elsewhere in this book.

At one time little or no money ever entered Hunza and the meager trade that they did do with passing caravans was by means of barter. The caravans coming through from China would bring cooking utensils, cloth, silk, tea and other commodities. For these, the people of Hunza would trade some of their crops or would work as coolies, porters or bearers.

During the past few years a bit of money has come

526 They seldom ever score 9 goals in less than an hour and many times a game will last half a day. And [533] through all this gleeful yelling and shouting—everybody seems to scream like mad—the band is playing its martial tunes.

When a player scores a goal, he proceeds to pick up the ball and follow the same procedure as the Mir did when he started the action. He races madly down the field, screaming and yelling at the top of his lungs. With the scoring of every goal they change ends; that is, what was the first team's goal now becomes their opponent's goal.

[164] From Gilgit to Altit, whenever I saw someone who had a broken nose or some other definite sign of body injury, I would know even before inquiring, that it was gained in honor on the polo field.

[535] When at last one of the teams scored 9 goals and the game was finished, both teams took part in a dance. The winning team dances first and when they have completed their dance, the losing team do their stint. How they could have the strength and energy required to dance, after hours of unrelenting top-pitch physical activity is more than any Westerner can understand.

The horsemanship displayed at the polo matches beggars that seen at western rodeos. In fact, a Hunzan polo game makes the wildest of rodeos seem almost tame. When it comes to horsemanship, you'd have to go a long way to get anyone to beat these tough, hardy mountaineers.

[164] So furious was the game that I inquired if anyone was ever killed playing polo. The Mir replied that he had never heard of any fatalities from a polo game, but that on many occasions a player was incapacitated. I [743] felt that it would be a good idea if they could build their polo fields close to the hospital at Aliabad!

352 Hunzans have charpoys. Most homes have a chest, or two or three or more, in which they store and keep their belongings. The chests are used to sit on and perhaps eat off. The Hunzan home we visited had a table also.

513 286 Every Hunzan home has blankets for covering during the winter and these blankets are made of homespun wool which is carded, loomed and woven by the villagers. They are equal in weight and warmth to the best blankets that are made in the West. There is no danger of the blankets not being 100 per cent wool, because wool they can get from the sheep or yak's backs.

342 Practically every Hunzan home has an upstairs, too, and this is where the family lives during the summer. It is related that each spring on the 21st of March the family moves upstairs. When there are 4 or 5 members in the family the upstairs is usually divided into two sections or rooms, leaving an open balcony in the center.

342 512 The usual Hunzan home is a place to shelter the family against storms, rain, cold and snow. It is not used nearly as much for social intercourse as it is in the West. Therefore, they don't spend as much of their time in the homes. Practically all daylight hours during spring, summer and fall are spent in the fields.

164 Some authorities attribute the good health of the Hunzans to the fact that most of their time is spent out in the open air and sunlight. Could it be that we in the West spend too much of our time inside our comfortable homes and not sufficient outside in the glorious outdoors? This is something worthy of thought and study.

Considering the heights, the ledges, the precipices and steep inclines that are found throughout this country, it is remarkable that there are few cases of injury like broken or fractured limbs, serious accidents due to falling and such. But you must remember that from infancy, children are trained and learn how to

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stay aloft. Heights offer no terror for any Hunzan— 164
man, woman or child. I think if a Hunzan suffered injury because of a fall from a height, he would be ashamed and embarrassed, but let me admit that they do have falls and broken limbs, too. I found this out [752] when I met Hunzans who were expert bone-setters.

I have to admit that generally speaking the Hunzans' 291
clothes are nondescript. However, I was strongly attracted to the Hunza hat which is best described as a rolled, sausage brimmed, soft white woolen covering. But it is really and truly an ingenious contraption. It is made of native homespun wool, white or creamy in color and mighty good wool, it is, in my opinion.

These hats are worn summer and winter by the boys and men. I tried them and found that they did keep out the summer heat. Wherever I met the boys and men of Hunza they always wore these hats. In the winter they can be rolled down to cover not only their ears but their faces and necks as well. I attest that it is a valuable and completely satisfactory headpiece. I thought they were quite attractive and enhanced the handsomest of the Hunzan men.

They have the choga which is a long flowing cloak worn by both men and women during the winter. This cloak is made of the same grey homespun wool and is never dyed but its creamy color is attractive and pleasing to the eye. Evidently this choga is quite [173] similar to the toga worn by the ancient Romans. Who knows? Maybe some of Alexander's men or Alexander himself brought a toga with him from his homeland when he came to the East.

Apart from the attractive, useful, comfortable, Hunzan sausage-brimmed hat and choga, the best I can say for the rest of the clothes worn by the people of Hunza is that they are utilitarian.

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CHAPTER 43

The Happy Hunzans

MY CHIEF OBJECTIVE in going to Hunza was to try, first, to find out if the people of Hunza were as healthy and as long lived as many writers and reports claim them to be.

Secondly, if they were the healthy specimens of mankind that the writers said, then I wanted to find out how this came about!

I don't claim to have any special perceptive powers, but the moment I arrived in Gilgit, I resolved that all of my faculties would be centered on observing the why's and wherefore's bearing on the health of these people.

I didn't have to be a very keen observer to realize quickly that in Gilgit the Hunzan aura of health did not hold. But remember, that was in Gilgit.

Gilgit reminded me very much of the typical frontier towns as we knew them in America, except Gilgit

361 [342] didn't just spring up overnight. By the appearance of the stone and mud houses, as well as all other features about the city, it was obvious that the city had been there for a long, long time.

Gilgit is indeed a strange city. It is one of these places that is right in the middle of nowhere, but to that mountain-harnessed area, Gilgit is a mighty important, strategic spot. Somehow I had the feeling that if there was a place called the "crossroads of the East" Gilgit had the sole right to the appellation, for through Gilgit would pass caravans from China, as well as travelers from Russia, Afghanistan, Persia, India, Pakistan and yes, undoubtedly from all other parts of the Eastern world.

000 While I did see quite a bit of the city and the surrounding country, I regret today that I didn't dig a little deeper and get about even more. I think Gilgit has many interesting stories to tell . . . how could it be otherwise? And if I ever go back (and I intend to) I would like to be the one who brings these tales to light!

121 [164] The Gilgitis, from a health standpoint or from appearance in general, did not impress me one bit. The people were somewhat similar to what you would find or expect in Pakistan or India. However, the moment I crossed the bridge over the Gilgit River and got into the hills, I resolved to concentrate, coldly and with deliberate calculation, on every individual we met. So many confusing and contradicting statements had been made about the people of Hunza, that I was firmly resolved that if study and scrutinization and observation would do the trick, then I would find out the truth.

124 Akbar was keeping pace with Cecil most of the time, while Sherin was with me, and I questioned him closely about every person that we happened to meet or pass. I had no trouble—none whatsoever—in spotting a Hun-

These men were carrying water from the holy of holies—the Ganges. They were intoxicated—not with wine, but with their faith. They were excited with the mysticism of their god; they were inspired; they were in seventh heaven. Yes, the gait of these divinely influenced people was close to the pace followed by the people of Hunza. 000

If I had seen somewhere along in my travels a Hunzan who slouched, dragged himself or in some other way showed a sign of weakness or debility, I would say so, but no such Hunzan did I see. 481

I fully realize that I scoffed at my Hunzan bearer that the Mir sent along with me from Kerimabad to Nomal, especially when he wanted to take the horses back from Chalt and leave us because he said he had blisters on his feet, due to the exceptionally hard push we had made that day, but remember, he was 20 years older than I! His feet probably told his age but he certainly didn't look it.

If there are sick and infirm men in Hunza, they must be exceptionally well-hidden, because I didn't see or find any. 164

Then, too, writers and observers of the people of Hunza always mention and stress the fact that they are a happy pleasant people. To this I must also assent. I did not see a sad or disgruntled Hunzan. I do not mean to suggest that they ran about the streets giggling and laughing, but they were of cheery, amiable countenance. Here I am going beyond those with whom I walked and talked and ate; I am delving into the citizenry that I passed on the roads or streets, those whose farms and homes we visited and also those whom I observed in passing. 157

Let me here illustrate another point. For example, it is understandable that we here in America, or people 181

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durance and stamina known anywhere, and if Shipton says that the Hunzans had more endurance and stamina than these people, no higher tribute can be given. 114 [147]

It is my humble opinion that too much has been written about the people of Hunza by people who have never been there and know little or nothing about the actual conditions that prevail in that country. Then, too, many visitors spent most of their time taking pictures, viewing the scenery and dining at the Mir's and didn't pay much attention or learn anything about the actual living conditions of the people.

The people of Hunza have not in the least benefited by the visitors that have reached Hunza, and if future visits are discouraged, I believe there would be good cause for it. 177

Most of the diseases known to civilization are unknown in Hunza. I do not ask you to take my word for it but that is my report from consulting the resident doctor in Hunza, as well as a German woman doctor who visited Hunza. 164 [759]

It is further true that the Mir's wife, the Rani of Hunza, had her appendix removed and she took a trip to Rawalpindi to have it done. But in the first place she does not live according to Hunza standards and besides, it was probably stylish to have an appendix operation. On the other hand, if a good surgeon were let loose in Hunza for a few weeks, there's no doubt about it, he'd have hundreds of appendixes removed before he could be stopped.

Another important point that I wish to make at this time is that I paid my own way to and from Hunza. I had no financial backing. Therefore I am not committed to aid anyone or any product or radio station or newspaper. I have no one to fear and no one to please. I can afford to tell the truth. 122

000 I do not intend to set the Hunzans down as a pattern or an example of how we should live because it just couldn't be done. However, unless you are stone deaf, blind and dumb, you can't help but realize that there is something drastically wrong with our way of life and living. That is why so many eyes and ears are being trained on Hunza. We hope, we pray that they have the answer.

There has been an awakening and it is growing throughout America. People are seeking health today more than they ever did in the history of mankind. But even with all the enlightenment available, they're still groping . . . they don't know where or how to find it, and the pity of it is that it is really so simple.

Too long already have we left our health and well being in the hands of doctors and surgeons and other types of healers, without going to the proper source—oneself and one's food. You forget that doctors, nurses, trained technicians and hospitals and other similar institutions are there to try to cure, not to prevent or advise. There is just no profit for anyone in propounding or teaching the simple, natural method that can keep everyone in good health. After all, a large share of our entire economy is now built around medicine, medical provisions and medical institutions. No one—not even the heads of our governments—would risk the shock that would be felt throughout the country if this gigantic, needless, useless structure were to be abandoned as it truly should be.

• 164 From what I have seen, from what I have heard and from what I have learned, I have reached this definite conclusion: no one single factor can be held up as the reason for the splendid health of the people of Hunza.

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CHAPTER 44

Health

FOR ME TO SAY that the Hunzans are the healthiest people of the world, which many authors and writers have claimed, would be sheer effrontery . . . mainly because I have not studied the health of all the peoples of the world, nor have I even met them. However, I do attest from what I have seen and observed, that the Hunzans are one of the healthiest people of the world.

To say that they are completely free from diseases or health problems is definitely not true. At the time when I visited Hunza there was a resident doctor located at Aliabad, where he was in charge of a 10-bed hospital. I conversed with him and questioned him daily during my stay and he answered my pressing questions with complete frankness and candor.

He is only a young man, a Pakistani, and his name is Dr. Mohammed Yusuf Khan, M.B., B.S. He is a handsome, capable, well educated doctor and is, in my

759 humble opinion, equal to the best medical men that we
115 can turn out of the European or American universities. Besides his medical degree, he also has a bachelor of science degree which most of our doctors do not have. So if anything, he is perhaps a little bit better learned than our average physician.

164 One of the first questions that I asked of the Mir of Hunza was, "Are there many known epileptics?"

The Mir thought for a moment and then shook his head and said, "No!"

So I turned to the doctor who was on my left and said, "Doctor, do you know of any epileptics in Hunza?"

At that instant the Mir got up and left the room . . . and I wondered about this.

There was a definite purpose behind my question concerning epilepsy. You see, it has always been my conviction—or at least for 25 years—that epilepsy is strictly nutritional. Of the few epileptics that I knew in my life all had peculiar eating habits . . . that is, they had their positive likes and dislikes . . . and from that day to this I have believed that epilepsy was basically nutritional.

"Yes," the doctor replied, "right at this present time I am treating three epileptic patients. One is from Nagir and two are from entirely different locations in Hunza. But the Nagir case is one of these dream cases —the kind that every doctor hopes he'll come across some day in his work."

"Yes," he went on, "this Nagir case performs every act described in the medical journals. He's a perfect textbook case. The sick man has every condition, symptom and manifestation of epilepsy known to medical science."

Statistics indicate that in America there is one epileptic to every 350 of the population. The population of

Nagir and Hunza would be somewhere around 50,000 people. That would allow the people of these two principalities 140 epileptics, to be on par with America. 164

When I mentioned this to the doctor, he pooh-poohed the idea and said, "I'm sure there wouldn't be a dozen epileptics on both sides of the river. In fact, with these three I think I have them all."

"What is the most prominent complaint that you find among the people?"

"Dysentery," he replied, without hesitation.

"Do you know the cause?" was my next question.

"I'm afraid I can't answer that question with any degree of authority or proof, but I can tell you this . . . that it is seldom very serious and the condition usually clears up in a few days. I know of no deaths caused by it."

Now the Mir returned and I was relieved, for I felt that I had offended the fine man by asking the doctor if there were any epileptics in Hunza, when he had told me there weren't any. 124

So I turned to the Mir and explained the situation to him, stating that in my eagerness to get the data I had asked the same question of the doctor and mentioned my fear of offending him.

He replied, "I believe friendship is made of sterner stuff than that."

I was surprised and delighted by this statement.

Then he explained that he was called by one of his servants who had signaled to him—concerning preparation for an event that was to take place that evening.

My next question to both the doctor and the Mir was, "Is there anything in the line of health or disease that is developing in Hunza different from the old pattern? Things that didn't occur before, that are beginning to appear now?" 164

164 "Yes," said the doctor, "I am alarmed at the great increase in goiter cases in Hunza, especially among the younger people, where it is rampant. Also, cavities in the teeth of the people are being found regularly, whereas a few years ago tooth trouble in any form was practically unknown, judging from the information at my disposal!"

When he spoke to me he was genuinely distressed at the increased occurrence of both of these maladies.

"To what do you attribute the increase in these conditions, Doctor?" I asked.

He replied, "As yet I have been unable to lay my finger on anything specific concerning this."

262 I have been interested in Hunza for many years and
263 during this period I have devoured every available piece of literature on these fascinating people. Thus, marshalling my mental forces, I said to him, "Have any major changes taken place in the diet or living habits of the people of Hunza?"

"Not that I am positively aware of," he said meditatingly.

"Where do the people of Hunza get their salt from?"
[439] I asked.

"It is usually flown in from Pindi to Gilgit and then carried up the trail to Baltit and other parts of Hunza."

I learned that it was also carried by jeep and pack animals from Rawalpindi across the Babusar Pass into Gilgit as well.

"How long has this been going on?"

This the good doctor could not answer. But the Mir
[439] was close by and he said it was longer than ten years now that the salt had been imported.

"Where did you get your salt from before?" I said to the Mir.

263 "Why," he replied, "the people of Hunza have been
317

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mining salt from an area around Shimshal for many hundreds of years." 263 [317]

"Is there any difference between the salt that you import and that of Shimshal?"

"Much difference," said the Mir. "The salt that we import is pure white and very salty, whereas the salt mined in the Shimshal area was in its natural state and contained many impurities. The people prefer the imported salt because of its sharper saltier flavor."

"So it is true then," I said to the Mir, "that this aspect of modern civilization has crept into Hunza!" [177]

The Mir and the doctor looked at each other and then somewhat reluctantly nodded in agreement.

Speaking somewhat forcibly, I said to both of them, "It is obvious that the imported salt is pure sodium chloride, whereas the salt that is brought down from Shimshal is something that has never been analyzed and obviously contains many minerals, so-called impurities."

Obviously the people of Hunza in the past did not know, did not care or did not feel the need to purify their salt, because even to a layman like myself, it is clear and obvious that by making a brine, the pure salt could be extracted.

Whether by error or design, this has never been practiced in Hunza.

"Does it not seem possible," I said to the doctor, "that the salt that was formerly used by the people of Hunza was the means of keeping goiter and dental caries away or at bay?" 164

"I hadn't thought of it before," replied the doctor, "but I will admit that it sounds logical and undoubtedly it is true!"

The Mir further admitted that little or no salt was being mined in Shimshal at the present time. Therefore it would seem to be indicated that the importation of

164 salt is causing the present goiter and dental caries situations in Hunza today.

"How would you describe the health conditions of the people of Hunza?" I next asked the doctor.

[758] "Since my coming to Hunza a little less than a year ago, I have treated but a few patients a day and seldom are there more than one or two of the hospital beds utilized at one time. Apart from the greatly increasing incidence of goiter and dental caries, no other disease seems to have a firm hold in Hunza.

164 167 "Now that many of the boys and men of Hunza are leaving to go into the army in Pakistan, as well as seeking employment in other adjacent areas, diseases never known in Hunza before are making their appearance.

753 757 "Another unfortunate characteristic that I have to contend with is the fact that the people feel quite shy of coming to a doctor for advice and treatment, especially when it is concerned with the personal parts of the anatomy. Actually they are callously indifferent to medical science. The majority of them are, in fact, still living in the bygone age when diseases were supposed to be due to influences of evil spirits. So they depend to some degree and waste much of early precious time in useless superstitious pursuits of driving away the ghost."

164 These one or two patients that he treats daily have in most cases only minor ailments and, at that, a good share of these come from across the river and from the neighboring state of Nagir.

It occurred to me that there would probably be more illness during the winter. Many cases of eye troubles are treated during the winter, due, primarily, to the fact [354] that most Hunzan homes are smoke-filled, because of the floor center fires and only the hole in the roof to allow the smoke to escape. Visitors invariably find living indoors and the smoke intolerable, but the people of

Hunza are more or less used to it. However, it does cause trouble with the eyes of the natives. It also weakens the lungs of some of the older women, who probably spend most of their time indoors during the cold months of the year. 164

I questioned the doctor and the Mir concerning prenatal care, but from what they told me, I could find no provisions whatsoever made for prenatal care outside the individual home. 843

The death rate at childbirth, they told me, was next to zero, but the doctor also mentioned that a woman would not consider going to a doctor for gynecological reasons under any circumstances. She would rather die. 165 845 757

He also told me that before and after delivery of a child, Hunzan women do not know of any rest. The pregnant woman works harder and does more laborious jobs till the last day of the term, in the belief that hard and laborious work makes delivery easier and uneventful. 843 846

"But," he went on, "they are very careful in exerting themselves during the early days of conception. After delivery they are again up and doing again, only after a short rest."

It seems to be obvious that the method followed by the women of Hunza prior to childbirth "works" because both mother and child come out of it "uneventful." When events occur at such times, it usually means serious trouble. 843

He went on to tell me further that gallstones, renal calculus, coronary heart disease, hypertension, valvular lesions, myxoldeama thyrsotoxcasis, mental deficiencies, cancer, poliomyelitis, arthritis and diabetes are absolutely unknown in Hunza. 164

From what I have seen and gathered I am worried about the situation. They are now importing their sugar, 177 263 439

177 their salt and soon there will be a few more items added
263 and, as more of their people go out of the country to
439 earn a living and come back to visit or retire, more of civilization's curses will be brought back with them.

165 The doctor rather clearly indicated that infant mor-
114 tality was not as low as some writers would like us to believe. I repeat—he made this quite clear.

• 164 Now I'll let you decide how it ties in with the statements made by Sir Robert McCarrison: "During the period of my association with these people I never saw a case of asthenic dyspepsia, of gastric or duodenal ulcer, of appendicitis, of mucous colitis, of cancer. . . . Among these people, the abdomen oversensitive to nerve impressions, to fatigue, anxiety, or cold was unknown. Indeed their buoyant abdominal health has, since my return to the West, provided a remarkable contrast with the dyspeptic and colonic lamentations of our highly civilized communities."

276 Smoking in general is not an addiction in Hunza. The water-pipe or hubble-bubble is used by some of the people, usually at gatherings or ceremonies. It is then passed around in a wide circle, each one taking a puff
[562] or two. The women are included, but only after all the men have finished.

Some of the citizens use snuff. It is tobacco mixed with the ash of a plant called "sopa," which is indigenous to that area. They take the tobacco and the sopa ash, put in a dash of water, stir it up and mix it into a paste. Then they place gobs of this paste under their lip, exactly the same as the snuff chewer does in the West, although this practice has been dying out in the Western world.

164 Just how much of the health of the people of Hunza
132 is due to the fact that they get a lot of sunlight? That is a most pertinent question and one that will take a lot

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of study before an answer can be given. They do get more sunshine than the Nagirwals—of that there is no doubt. While in Nagir fields are definitely in better tilth, their land is deeper, they have broader and more fertile valleys and can grow more and better food, yet undoubtedly the people of Hunza are by far the handsomer, healthier, more industrious and more energetic.

For my part I wasn't completely sold on the principle that the people of Hunza did have much more sunlight than the people of Nagir and I debated the matter with a few individuals. But each of them maintained stoutly that they did and claimed that they had scientific proof that Hunza did get more sunlight.

The last man with whom I did battle on the subject was Dr. Hermann Berger of West Germany. From his investigations he said that he had reached the conclusion positively and unequivocally, that the northern slope of the mountains through which the Hunza River flowed did get more sunlight than the southern slope which was Nagir.

As I found considerable difficulty and doubt concerning the theory of the people of Hunza getting more sunlight than the people of Nagir, I decided to draw a little chart that would illustrate the situation as I eventually found it to be. After seeing the drawing I think it will prove to you that the principle is natural and reasonable. (*See Fig.* 1.)[1]

1 [facing p. 390 - ANALYST]

165 I checked as thoroughly as possible and there are at least a dozen men in Hunza over 100 years old and no doubt a hundred over 90. Yet the oldest man that I met was 105 years old but by his appearance, his speech and his activity, he'll be around for a good many years.

No, I don't think anybody was trying to fool me about their ages. I can't see what they could gain by it. On the other hand, I don't think I'd be the easiest man in the world to fool. At least my friends don't think I would be. If and when you meet the Hunza people, you will find that you accept them as a fine, upstanding, honest race. Therefore I cannot see why they would necessarily lie about their ages. Of course [217] no vital statistics are kept in Hunza and therefore they cannot offer proof by means of birth certificates concerning their ages.

I met a few groups of men, all of whom claimed to be in their 70's and over, and they were a mighty healthy looking bunch of individuals. Most certainly the average group of people in any part of America at that age wouldn't remotely resemble that fine group of Hunzans.

•164 I don't think that is hard to understand. People who have been denied luxuries and who have had to work all their lives and spend a lot of time in the open air doing manual labor should be healthy, especially when they have good natural foods.

[165] It is my sincere belief that the ages and the health of the people of Hunza have not been too greatly exaggerated.

It is possible that I have strange ideas, but I've always believed that physical work and exercise have a lot to do with a man's health. Well, in Hunza if exercise will make them happy and healthy, they should be the happiest and healthiest people in all the world. There

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are, remember, no transportation facilities whatsoever, except the Mir's jeep which the citizens of Hunza don't get a chance to use. There is no other wheeled vehicle in the entire country. Practically every step is a climb or a descent. So no one could really accuse me of exaggeration if I were bold enough to say that they're probably the most active and energetic people in creation. It could hardly be otherwise.

To illustrate another proof of their hardiness, all along the trail we met people from Hunza walking barefoot—from young children to boys and young men and old men. While some wore shoes, most of them were barefoot. They walked over sand, over gravel, over stones, over plain dirt roads without any misgivings.

I watched them with awe as they ran, walked and skipped over these exceedingly rough spots and I was convinced they must have exceptionally strong, sound. healthy feet and legs.

On a few occasions I watched the Hunzans digging with a shovel. 'Tis done the ordinary natural way there —barefooted. That certainly proves, at least to me, that their feet are in wonderful condition. Most people in America can't dig worth a darn wearing heavy boots!

It is unqualifiedly a fact, in my humble opinion, that the people of Hunza owe their splendid vital good health in part to these sound principles—their way of life, their food production and the way they prepare the fields for their crops—all accomplished in a natural normal way. Civilization may have many advantages—great discoveries have been made, machinery has been invented that does the work of many, many hands. In this modern machine age, a man need only work a couple of hours a day to supply himself with all the food, clothing and shelter that he can possibly use, but

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164 obviously this type of living has taken its toll. Thousands, if not millions, of men are dying at 40 and 50, struck down by heart disease, diabetes and cancer. Well, isn't it strange that these diseases are unknown in Hunza?

ooo *"For what shall it profit a man, if he shall gain the whole world, and lose his own soul?"* MARK VIII: 36

Of what use is it if man has leisure, food, clothing, the best and most comfortable of homes, if he doesn't have the years of life in which to enjoy them? What good is it striving, straining, sweating when you are young so as to have a pleasant old age, when there just won't be any middle or old age?

I'm not suggesting that anyone give up the comforts to which they are accustomed, but I would suggest that modern living has caused a softening or a decadence in the very fibres of our bodies, which is showing the result in the deaths of many men in their prime —at 35, 45 and 55!

If you had the choice of dying at 50 or living in Hunza under their austere conditions to be 80 or 90, which would you choose? Think it over. I know . . . you'd choose the 50 years of soft, modern, debilitating life because you are led to believe that it is a good life. Methinks you'd be making a terrible mistake. Not many men in America are smart enough to live to be 80 or 90. In Hunza it happens whether you're smart or not, because you can't commit suicide by eating. If you want to die by your own hand, you've got to jump off a precipice.

'Tis true, the people of Hunza do not have any of the modern doubtful blessings to which I refer, but they do have, for you and all to see, health, strength, endurance, a smiling and pleasant countenance and many years of life free of disease and sickness.

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I would very much like to have you ask of me now a question such as this one, "To what do you attribute the health and the long life of the people of Hunza?"

In reply I would just love to say, and allow my voice to ring both loud and clear, "Their natural way of living! The way they follow nature's path!"

While the above is absolutely true, it is not the whole story nor is it that simple. The path or road to health and long life is not an easy road. No, it is totally unlike the paved, graded, banked highways that we know in the West. It is exactly like the Hunza Road through the glittering peaks of the world's highest, most perilous mountains.

Good health and long life seldom, if ever, come to a man by sheer good fortune, luck or accident. My observations tell me that health and long life, like the price of freedom, are to be had only by eternal vigilance. One must continually watch how he lives, how he practices field husbandry, what he eats and how much he eats. It is absolutely true that the people of Hunza use no chemicals either on their farms or in their foods. To begin with, they do not have the wherewithall with which to buy them. Secondly, it is problematical as to whether or not they would take to them. But as I have related, they have taken to salt and some sugar, so the chances are they may take to other of civilization's titbits and ways, if they get the opportunity.

Yes, I feel that I have learned the secret of the excellent health and long life of the people of Hunza. I did not learn this by accident, either, but it gradually dawned upon me and came to light when I combined my actual observations on the scene, my close and insistent questioning of innumerable people, and last but not least, from actual scientific research in an ap-

164 proved laboratory by a qualified technician.

164 Their food is natural, simple, unsophisticated, without any unnatural, inorganic, synthetic additives whatsoever. There is no fragmentation in the foods they eat. They do not separate any part of the wheat when they make flour, nor do they separate any part of the other grains when using them.

252 Due to necessity they do not cook foods too much, nor do they cook any food that can be eaten and enjoyed without cooking.

Food is a serious, all prevalent problem. The few trees that they have and that they can grow must be protected for food, shade and timber.

However, I must truthfully admit that the reason that the Hunzans do not cook their food is because of the scarcity and inaccessibility to supplies of fuel.

751 Vaccination is not practiced and, as far as I know, is unknown in Hunza. Pasteurization in any form is neither practiced nor known. Chlorination is unheard of. Fluoridation is unheard of. No coloring whatsoever is added to any of their food, not even their butter.

263 Up until recent years the salt used by the people of Hunza came from the Shimshal area, somewhere near where the Shimshal River and the Muztagh join together. This salt is unrefined and used just as it is mined from this mountain area. It obviously contains many natural so-called impurities.

493 The only wheeled vehicles—two jeeps, in fact—are owned and used by the Mir chiefly for bringing in supplies, when road conditions permit. Therefore one must walk for every chore. There is no motorized

377 equipment used in Hunza with the exception of the electric light plant in the Mir's palace. Apart from what

401 I have mentioned here, mechanization of any sort is unknown.

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Both the irrigation water which they use on their fields and their drinking water come from the Ultar Glacier. Therefore, their entire water supply is glacial. 312

Their entire economy is dependent upon their agriculture and everything that is taken from the soil is religiously returned to the soil. Chemical fertilizers or chemical sprays of any type are unknown to the people. It may be possible that the Mir has used sprays in his palace grounds. He might have brought them with him from his visits abroad, but I saw none and, to the best of my knowledge and belief, none are used. I saw no insect infestation of any kind or type through my entire travels and investigations. In Gilgit I did see insect injury in a garden and it was apparent to me that the soil of Hunza was in balance and therefore it produced food that was balanced. Therefore, it is understandable, the people of Hunza are healthy! 241 [433]

The food of the people of Hunza is in the main, raw food. It is neither dissected nor desiccated, but is eaten in the whole. The only exception that I could find to this rule was in their milk. When they made butter, they drank the remains or the buttermilk. Of course, in due time, they ate the butter. 262

All children born in Hunza are breast fed for at least two years. Male children are often breast fed until they are 3 years old. 853

I do not intend to stress any one factor of the points mentioned above. I am submitting them to you for your consideration and study. 000

It is, however, my belief that their soil and location does not lend itself to mechanization and therefore their good health should continue. If they could mechanize, then they would not get the needed beneficial exercise which, as you can gather, is one of the important contributors to their good health and longevity. 241 164

000 from it the organic method of land use.

262 From what I have seen, I have deduced the fact that the people of Hunza use less fat of any kind than most people found throughout the world. Some nations may lack animal fats, but make it up by fats found in [133] fish. The people of Hunza have very little animal fat and no fish, for there are few lakes in the area and the only fish that are found in the streams are those that were placed there, in an attempt to stock the Hunza and Gilgit Rivers and some of the nullahs.

They do get some fat from the butter that is made from the milk of the goats, sheep and a few cows and yaks. They also get a bit of fat from their walnuts and the kernels of the apricot seeds, neither of which can be considered to be high in fat content.

Lest you think that this lack of fat would have some effect on the people, let me stress that there are no more energetic people found in the world and they are continually active.

251 As soon as fall sets in and the harvest is completed, they carefully select and store and prepare their winter's larder. Then they divide and apportion all of their foods so they will last them throughout the winter.

262 An important addition to their winter diet is a gruel or a soup that they make from the various grains and this is eaten with their chapatties.

515 Dentifrices or toothpastes or powders of any kind
164 are not used in Hunza. Yet the people have unusually fine teeth. False teeth, plates or dentures are unknown. So even at the expense of antagonizing the toothbrush and toothpaste people, it would appear that these implements and concoctions do not create good healthy teeth.

* * * * *

000 I have debated within myself whether or not I should

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I found the Rani to be the most beautiful woman in Hunza. I didn't dare ask her age, but I know she was married to the present Mir in 1934. Therefore she must be close to or in her 40's. She could undoubtedly pass with any woman in her early 20's. But there were few, if any, women in Hunza like her. 142

I further will grant that I, or anyone else for that matter, would have very little opportunity of seeing Hunzan women at what might be their best. To state my views candidly, I'd say the men definitely looked youthful, but the women looked to be older than their years.

Perfect health—I have never seen, as yet, a race of people that was as healthy as the people of Hunza. But to say that they were a race that enjoyed perfect health, I would consider a bit of an exaggeration, because the doctor does treat a few patients now and then and the hospital does harbor a few sick people. I must honestly admit that I did not see any sick people in Hunza, but there are quite a few who do not enjoy perfect health. 164

A pre-Bronze Age people—Here I suspect someone wanted to show his knowledge in archeology or anthropology, whichever it may be. (I am expressing my ignorance to begin with.) They are no more Bronze Age than was the writer who referred to them as such. This would take them back between 4,000 and 5,000 years which is utter and sheer "poppycock." He further stated that they were isolated for 2,000 years. If that is true, they were isolated because they wanted to remain that way. 174 [177]

It is a fact that there is a caravan trail right through Hunza. It is the shortest route from China to Persia and leads through Hunza, past Gilgit and across the Babusar Pass and then on westward or southwestward. 487 177

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534 644 *The piano in the palace was brought by the Mir's grandfather.* This was stated in one of the books I read about Hunza.

The story from the Mir's own lips is, "The piano was brought to Gilgit via Bandipoor and Burzil Pass from Kashmir for the Political Agent who was British. It was installed in the Political Agent's house in Gilgit in 1895. In 1947 when the partition came, it was presented to me by the last British Political Agent, Colonel R. N. Bacon, along with the Union Jack which is unfurled in Gilgit. The piano was brought to Baltit on the backs of 24 men." [482]

164 *Disease is unknown in Hunza.* Oh, how I wish that were true! It was the fondest wish of my heart and soul when I left for Hunza that I could return and be able to attest the fact that disease is unknown in that country.

From definite assertions made by the doctor who was stationed at Aliabad in Hunza, it is true that such diseases as cancer, diabetes, heart disease and hypertension are absolutely unknown in Hunza. But there are other diseases, perhaps not as crucial but, nevertheless, maladies of a serious nature.

As more of civilization's luxuries become known and used in Hunza, it is assured that many more of the diseases of civilization, as yet unknown in Hunza, will make their way into that country.

165 *No infant mortality*—I am unable to speak for the past, but at the present day infant mortality is known in Hunza. As mentioned elsewhere in this book, statistics are unavailable as no records are kept. But the present doctor in Aliabad forcibly states that infant mortality is a force to be reckoned with in Hunza at the present time.

value to the people of Hunza? Let's examine them. 000

Let's start with pasteurization. Well, it would be very difficult to pasteurize in Hunza. First of all, they don't have the means of providing the required heat. Besides, they don't suffer from any conditions which pasteurization would cure—if it does cure anything. 744

How about hospitalization? Well, they have a comparatively new, modern hospital in Aliabad, but the people don't use it very much. They distrust the hospital and they distrust the doctor, even though he is a fine capable fellow. Besides, I did not notice, particularly, any sick or ailing people sitting around, waiting for a hospital bed. 743

Then how about inoculations? To begin with, what would you inoculate them against? They don't seem to have many, if any, of our diseases. Then, too, there are no inoculations against cancer, diabetes, heart disease, arthritis and such, anyway. Oh, yes . . . besides, these diseases have never been known in Hunza . . . not even poliomyelitis. 751 164

The Mir has a huge medicine chest that was given to him by the German expedition, which was stationed across the river in Nagir. Yes, it did prove most useful —for it helped a man get well. However, I must admit rather dejectedly that the man the medicine chest helped was my companion and not a citizen of Hunza. 757 177 123

They could use a dentist and right here you have struck gold! However, it would be most difficult to get a dentist to set up shop in Hunza, unless he were given room in the Mir's residence, for that's the only place where electric power is provided . . . unless the dentist didn't mind going back to the old days when the old foot pedal was used for power. 759 164

But let's be realistic about it! Wouldn't it be much better to give the people of Hunza back their old [263]

759 natural salt, which was mined at the confluence of the
• 164 Mustagh and Shimshal Rivers? Then a dentist wouldn't
.263 be necessary. I trust you will pardon me if, here and there, as the situation demands, I become my own interrogator.

000 So after all is examined and said and done, how can the Western world help the people of Hunza?

If you asked me this question, I wouldn't want to answer it openly or boldly. But if you pressed me, reluctantly I'd say that the greatest contribution that the West can make to Hunza, or to their good health and longevity, is to stay away. Leave Hunza alone!

Somebody asked me if I would like to live in Hunza. In some respects, that is an unfair question.

It's like this. The climate of California is considered to be the most salubrious and pleasant in all of the United States. Well, why don't all the people of the United States move to California? Economic reasons? That might be a factor . . . but not a very important one. There are other considerations, too, I guess. But basically, everyone doesn't want to live in California—even if it has the most wonderful climate and they have sunshine all the time.

I'd love to go back to Hunza and spend a few more weeks there . . . and if I had been born in Hunza, I'm sure I'd never want to leave the place. But I doubt if, at my age, I'd be able to adjust myself to a change as drastic as the one I would have to meet in Hunza. After all, I am a product of Western civilization—whatever that is.

"Do you think conditions would be too difficult for you in Hunza?"

I believe a young, normal, healthy, strong individual of sound mind could adjust himself to the conditions of Hunza without too much trouble. I am not maintain-

by what he omits as by what he states. In this instance I am somewhat on the spot. I don't want to fall prey to the errors and omissions which I have condemned in others. I did pointedly seek and ask details concerning the ailments of the people of Hunza. I did seek to find out the diseases that are unknown in Hunza. I also wanted to learn the diseases that are most common and that generally affect the health of the people. And here is the picture.

They have trouble with their eyes. They suffer from stomach disorders—chiefly dysentery and worms. They are subject to skin infections, fevers, weak lungs, goiter and dental caries. Whether or not you wish to attach any great importance to the maladies I have outlined above, I feel that I should explain one or two of the contributing factors.

Remember, the Hunza homes do not have chimneys. Besides, they have so little fuel that they don't want to waste any of the heat . . . and the smoke is allowed to escape only through a hole in the roof. I don't know if this affects their lungs. It probably would. But I know that it does cause most of the eye ailments.

Concerning stomach disorders, it may be possible that the ingestion of continuous quantities of mineral laden glacial waters contribute to this condition . . . but I am unable to state categorically if this is true.

Goiter and caries of the teeth have become a leading health problem. But these conditions were comparatively unknown when they used their native salt.

All through my travels in that area I did not come across one sick native. But that need not have any great significance, because sick people probably stay out of sight, and therefore they wouldn't come within range of my vision or my wanderings.

I must emphasize here that every man that I saw in

164 Hunza appeared to be the picture of health and contentment.

ooo Since my return from Hunza I have become noticeably health-conscious. And I have been appalled by the number of sick, ill and ailing people around me. It is becoming rare and unusual to meet a person who will boldly say that he is in perfect health at 35 or 40 years of age. And is there a large mature-membered family about, who doesn't have one of its members ill, dying or dead from one of our many dread diseases?

No, I resent any insinuation on the part of anyone to the effect that I am overdramatizing or accentuating the picture or situation. I believe that every community in America has had additions or new hospitals built, and even with all that, they are unable to take care of the applicants who desire to enter them as patients.

No wonder people are interested in the "Healthy Hunzans."

Taking all factors under close observation and consideration, I have reached the conclusion that ours is a condition of ill health and that the people of Hunza enjoy good health. Whether it is due to their way of life, as compared to our manner of living, depends entirely upon what you are willing to accept. It is my conviction that we can enjoy the same health that the people of Hunza enjoy if we will live according to the rules and laws of nature—right here in America!

8:Clark N-5 (1948-1951) 1963
AV7 Burusho AV7
Hunza
[P.39-B]

By JOHN CLARK

123
164
THE FOLLOWING IS AN ENTRY in my weathered notebook of a decade ago, written when, as an American living in the Himalayas in a run-down castle, I was operating an infirmary:

[526] "'Salaam aleikum, Hazoor! my trouble is very great,' said old Bohar. He raised his white-stubbled chin and pointed to the source of his pain.

"I looked and shuddered a little. Four oozing, open holes, each the diameter of a pencil, pierced his chin and jawbone. I asked him to open his mouth, and he complied, exposing a row of teeth worn absolutely flat. I ran my finger across his lower teeth; four were so loose that I was able to

8:Clark N-5 (1948-1951) 1963
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Hunza

[P.39-C]

123 pull them out with my fingers. Bohar
164 gasped, then relaxed as the extraction permitted the abscesses at the roots to drain more freely."

101 This was in Hunza, the small, moun-
131 tainous, Central Asiatic kingdom
121 bordering on China, Kashmir, and Afghanistan, about which there has been recurring publicity, characterizing the land as a Shangri-La peopled by men and women of extraordinary
121 health and longevity. Since the beginning of man's role as a traveler, tales of far-off earthly paradises have been brought home to entertain the untraveled. No matter how many such El Dorados perish under examination, the next is inevitably welcomed into the lists with unblemished credulity.

[text continues on p. 40-B]

8;Clark N-5 (1948-1951) 1963
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Hunza

[P. 41- A]

114 Western equipment. (Training in anat-
123 omy, some concentrated informal studies of Asian diseases, plus previous experience, made this possible for me. In addition, I ran three experimental gardens and founded a craft school, with the Mir's approval.)

● 164 Bohar had developed scurvy, after
146 which staphylococcus infected the
123 gums and abscessed the roots of his teeth; the abscesses had then eroded downward through the jawbone and out through the flesh and skin. After washing out the sores, I gave him vitamin C tablets to stop the scurvy, and vitamin D with calcium lactate to cure the rickets that were stiffening his knees. The old man was by no means
[252] atypical. My dispensary was always beset by lines of waiting patients, all with afflictions that belied popular beliefs about "the Healthy Hunzas."

8:Clark N-5 (1948-1951) 1963
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[P. 41-B]

164 beliefs about "the Healthy Hunzas."
123 Altogether, I was able to treat 5,680
[743] medical cases—the country had no other dispensary—during my stay in
164 Hunza. My daily group of patients did not suffer from many of the diseases
[158] common to our civilization. There were no true neurotics; no cases of stomach ulcers, appendicitis, or gout; only one case of cerebral hemorrhage,
[482] and but four cardiac cases. The few
[143] bad hearts had been damaged either by malarial anemia or by overexertion at high altitudes, as was the case with one man who had carried the Mir's piano on his back up twenty miles of mountain trail. On the other hand, my Hunza patients did have malaria. They also had at least two kinds of intestinal worms, and to see for the first time a man with *Ascaris*

[P.41-C]

164 worms impacted in his duodenum is appalling. The disease is more painful than the ulcers Hunzas do not have. Hunzas also suffer from trachoma, pneumonia, tuberculosis, a fatal type of dysentery, and violent staphylococcic infections of their eyes, teeth, and skin. I never observed cancer.

Total blindness, too, often afflicts the Hunzas and is caused by staphylococcus infections, cataracts, and pterygium. (More than five per cent of the population had trachoma.) I cannot forget the father who brought me his nine-year-old daughter with both her eyes horribly swollen from staphylococcus. They came the day after I had run out of antibiotics. The next shipment arrived by caravan two months later when the little girl was permanently blind.

[text continues on p. 42-B]

584 Marriages are not arranged against
586 the will of either party, and although
divorce is legally very easy for men
593 or women, it is not common. Women
are neither abused nor overworked,
and the mother is the respected chief
of the house, as the father is of the
[581] farm. Marriage does not encompass
[562] companionship as we know it: men
spend their spare time in the company
of other men, and women visit exclu-
562 sively with other women. They hold
535 their dances on separate threshing
floors a half-mile or so apart, on the
same night, and woe betide the eager
teen-age boy who dresses in his sister's
clothes and sneaks into a girls' dance.

262 At the time of the Tumushuling,
[796] and only then, Hunza families
231 butcher a sheep or two: cold weather
[251] preserves the meat for the few days
before it is all eaten—and it *is* virtually
all eaten. Even the long bones are
cracked to extract the last marrow.
After this taste of meat, the winter of
the dietary year sets in. Gradually the
supply of carrots and potatoes fails,
then the wheat, the barley, the dried
[141] apricots, and the tea. By springtime
the poorer folk may eat only once in
two days. No one starves to death, but
no one has enough to stop hunger.

146 The regular Hunza diet has no fats,
no animal proteins, no vitamin A, no
vitamin D, a deficiency of vitamin B,
and a serious deficiency of calcium.
Apricots contain some sugar and vita-
min C, but the poorer families are un-
245 able to raise large crops. (The size
556 of apricot orchards determines a
man's wealth and status.) Hunzas use
372 every bit of the apricot, as they do of
824 the sheep. They cut the pits from the
fruits, crack them, and remove the al-
[412] mond-like nuts. The women hand-
grind these with stone mortars, then
squeeze the meal between a hand-stone
[359] and a flat rock to express the oil. Apri-
cot oil is fuel for the saucer-shaped
lamps that illuminate their homes, as
lamps of this type have done since the
824 Bronze Age. The oil is very bitter, na-
278 turally enough, because of its high
content of prussic acid, fifty drops of
which are said to be lethal in about
[273] four hours. Men add a few drops, as
[762] bitters, to their wine, and occasion-
ally a despondent woman takes a dose
in order to commit suicide.

●164 Mild cases of rickets and scurvy
146 are rampant every spring—not enough
to kill, just enough to loosen teeth,
cause aching knees, and deform ribs

164 146 into the "fine, barrel chests" reported by travelers. (I found that when they took off their shirts the fine, barrel chests revealed strong asymmetry, with ribs notably warped by rickets.) During my first winter, I developed a typical case of beriberi, even though my diet was more varied than theirs and was adequate in quantity.

133 161 [18] The basic trouble rests not with the Hunzas, who are neat, intelligent, and hard-working, but with their country. There is no flat land in all of Hunza. [36] [31] Villages and farms are built on alluvial cones—fan-shaped masses of gravel dumped by streams rushing from mountain glaciers down into the valleys—and the small cultivated areas simply are not extensive enough to support the constantly increasing population. (The Mir estimated the population of his country at 25,000 in 1951. According to one of the last of the British agents stationed in nearby Gilgit, Hunza's population was increasing at the rate of 30 per cent each [67] decade. Rising emigration and the absence of written records obscure the reality, as one might imagine.)

311 24 Hunza's slopes are so steep they must be terraced by the laborious construction of hand-built retaining walls of boulders. I measured one cultivated slope of 60 degrees—so steep that the retaining walls were twice as high as the miniature plots they supported. And sometimes Hunza farmers will even create arable soil on top of bare rock. After a crescent-shaped wall at the foot of any fairly gentle rock slope is built high enough so the top of the wall is level with the top of the slope, the wall is carefully chinked and mud-calked, then sandy water from the nearest irrigation ditch is admitted to make a small pond. When the sand settles out, the clear water is drained, and more sandy water is admitted. This process is repeated for about two years, until enough sand accumulates to allow cultivation.

134 311 Much of the "soil" of Hunza fields is thus not really soil. Rather, it is a jumble of unweathered boulders, [132] [137] gravel, and sand. Since Hunza is a cool but exceedingly dry desert, practically no plant food is formed. The scant rain that falls soaks rapidly through the spongy sand, leaches out any trace of plant food that may be present, and carries it down to the river. Not even sagebrush will grow on the unirrigated areas, so most slopes are barren. Newly irrigated areas are

4: Durand G-3 (1888-93) 1900 AV1 Kashmir
Burnsh AV7

had to set to at once. Not that I was the only one. Aylmer, though still suffering severely from his wounds, spent all his time designing bridges, and, as soon as he could crawl, passed his days on the river bank, superintending the preparations for throwing a wire-rope suspension bridge over the Gilgit river. The bridge he had built in the previous November was only a temporary one to serve while the river was low.

My first difficulty was food, and I had to send one regiment away at once eighty miles up the Indus valley to Skardu in Baltistan, where the state granaries were full. There was no danger in doing this now, for the sound of our success in Hunza and Nagar had reverberated through Chitral, and rolled down the Indus valley. No one felt in the least inclined to attack us at the moment.

The failure of the Kashmir transport arrangements during the previous autumn had been too marked to be overlooked, and I received orders from the Resident in Kashmir to submit a scheme to remedy the existing evils. I was pretty sick of submitting schemes, but I knew what was wanted and could point out the difficulties, which no one who had not visited Gilgit would ever believe in or realise. The result was that the whole commissariat arrangements for Gilgit were put into the hands of an officer of the Indian Commissariat Department, and that the difficulties properly grappled with were conquered.

164 An untoward event occurred in the spring of 1892. I had started vaccination in the Gilgit district with marked success, but the work had been put a stop to

4: Durand G-3 (1888-93) 1900 AV1 Kashmir
Burusho AV7

by the campaign, and our supply of lymph had run out. More was sent for, but the first consignment was frozen crossing the passes and proved useless. Before the second lot arrived small-pox broke out, and most unfortunately one of the prisoners taken at Nilt contracted it. This was not discovered before the men were dismissed to their homes, and the disease went up with them. In a few weeks it was raging, and in Nagar alone two hundred and fifty people died of it. The danger was increased by the habit of inoculating which obtained in the country.

By the beginning of April I was sufficiently recovered to travel, and I started to visit Hunza and Nagar. Colin MacKenzie, now a Major for his conduct of affairs, accompanied me, and we visited Nilt with interest and fought the battles over again. The country was recovering, but showed traces of the war. Nilt and Mayun were in ruins, many villages along the road had been set fire to by Uzr Khan in his flight to spite us, and the people, sore and angry with him for the losses his folly had entailed on them, were civil but depressed. Small-pox was raging—almost every man, woman, and child you met showed signs of the disease. I received the old chief of Nagar at the village of Sumayar opposite Hunza, and had to sit for an hour hand in hand with him discussing the affairs of his country. He had been inoculated and had small-pox on him. It was not a pleasant experience, but I had been vaccinated shortly before, and it had to be gone through.

We had a very pleasant time in Hunza, where the people were delighted to have got rid of their